



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,822	03/15/2004	Tatsuhiko Shibuya	372106-102A	1620
38552	7590	04/04/2006	EXAMINER	
DECHERT LLP			MOORE, MARGARET G	
P.O. BOX 10004			ART UNIT	
PALO ALTO, CA 94303-0961			PAPER NUMBER	

1712

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/800,822	<b>Applicant(s)</b> SHIBUYA ET AL.	
	<b>Examiner</b> Margaret G. Moore	<b>Art Unit</b> 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 January 2006.  
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 to 16, 21 to 29 is/are pending in the application.  
 4a) Of the above claim(s) 21 to 29 is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1 to 16 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 1712

1. Claim 7 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. This temperature range is broader than that in claim 1 and as such is not further limiting.

2. Applicants' amendment has overcome the prior art rejection. Upon an updated review of the prior art, considering the claims as amended, the following new ground of rejection is made.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 to 16 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over WO 99/61140, herein '140.

'140 teaches a method of making a silica based film. In this method a combination of a tetraalkoxysilane and an alkyl trialkoxysilane are hydrolyzed in the presence of an acid catalyst. See for instance page 2, lines 7 and on, including line 32 on page 2, line 10 on page 3 and lines 13 and on of page 3. Line 27 and on of page 3 teaches a drying condition in a non-oxidizing atmosphere of up to 800°C.

Particular attention is drawn to Example 2 starting on page 4. This shows the acid catalyzed hydrolysis of TEOS and MTES meeting the compound of formula (II) and (III) in claims 1 and 2, in amounts meeting that of claim 3. These compounds are dried in pure nitrogen (which is defined on page 5, lines 27 and 28 as having an oxygen content of <5 ppm). This reaction differs from that claimed in that the coating is not baked at a temperature of from 680°C to 750°C. However, as shown on page 3 the baking can occur at temperature of up to 800°C, thus embracing and suggesting to one having ordinary skill in the art the claimed range. That is, upon reading the upper range

of 800°C, the skilled artisan would have been motivated to select a temperature within this range with a reasonable expectation of success. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art (i.e. does not require undue experimentation). In this manner the temperature range of claim 1 is rendered obvious.

On the other hand, note the teachings on the bottom of page 5 which states that "experiments were performed in a pure N<sub>2</sub> stream... and a heating rate of 1°C/min to 800°C". This indicates that the films were, in fact, heated to a temperature of 680°C, 681°C, 682°C, etc., up to 800°C in an inert atmosphere having the claimed oxygen content. In this manner the instant claims are anticipated by the teachings in '140.

The Examiner relies on the inherency rationale noted previously for claims 4 to 6. While these properties are not specifically taught, the method claimed is fully met by the method in '140 and as such any property that is inherent in the claimed film must also be inherent in the prior art.

For claims 8 and 9, note that these limitations are found in the noted working example in '140. For claim 11 note that this is a product by process type requirement and since the process in '140 meets that claimed, it follows that the molecular weight of the hydrolyzed silanes will also be the same.

For claim 13, see page 3, line 19. Claims 14 and 15 are met by the examples in '140. For claim 16, note that such drying steps are also met by the heating process noted supra in which the temperature increases by 1°C every minute. Note that this method does not exclude additional heating steps in between those claimed.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

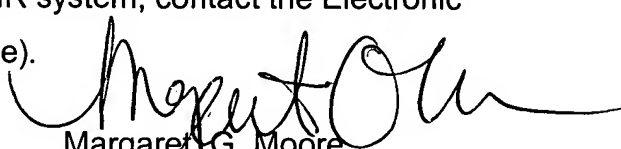
Art Unit: 1712

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret G. Moore whose telephone number is 571-272-1090. The examiner can normally be reached on Monday to Wednesday and Friday, 10am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Margaret G. Moore  
Primary Examiner  
Art Unit 1712

mgm  
3/30/06